

**Exhibit No. 61**

**3599**

**EXHIBIT NO. 61.**

—  
[22766]

**FEDERAL POWER COMMISSION**

**Docket No. IT-5915**

**PENNSYLVANIA WATER & POWER COMPANY**

**ANNUAL AND ACCRUED DEPRECIATION**

**Bureau of Accounts, Finance and Rates  
Division of Accounts**

[22768]

## ANNUAL AND ACCRUED DEPRECIATION

*Summary:*

A comparison of annual and accrued depreciation, per books, as adjusted, and as computed by the Commission's staff, is presented on Schedule 1. A summary of these figures follows:

	Per Books As Adjusted	Depreciation Requirement	Difference
Annual Depr.			
Expense—1944	\$ 572,365	\$ 464,212	\$108,153
Annual Depr.			
Expense—1945	574,245	465,277	108,968
Average Depr.			
Reserve—1944	7,978,118	7,783,095	195,023
Average Depr.			
Reserve—1945	8,506,513	8,204,770	301,743
Depreciation Reserve			
Balance 12/31/45	\$8,763,118	\$8,408,373	\$354,745

The required annual depreciation expense is \$108,968 less than the amount presently being charged. The reduction is primarily due to the longer service lives recommended by the Commission's staff, which result in lower annual depreciation rates. The reclassified depreciation base is somewhat less than the depreciation base used by the Company, due to a redistribution of overheads which assigned more overheads to non-depreciable plant, but this difference has much less effect on the amount of depreciation expense than the change in service lives.

The reserve requirement is \$354,745 less than the depreciation reserve per books, as adjusted. This is an indication that the Company has included some provision for maintenance in its [22769] (page 2) depreciation reserve, as it has stated in its depreciation plan. One reason why the excess of the adjusted book reserve over the reserve

requirement should be retained is to provide for the repair of the surface of the dam, estimated to cost from \$500,000 to \$750,000. Since the deterioration of the surface of the dam has occurred in the past and the Company has provided for some of this cost in the past, through depreciation charged to and collected from its customers, the adjusted book reserve is deducted from the gross investment in plant.

The staff has not recomputed the depreciation expense for automobiles and trucks. The Company keeps a separate record for tax purposes showing the cost, depreciation and reserve for each auto, so that adjustments for over or under depreciation are made currently. Since no provisions for auto retirements have been made in the required annual expense, such retirements, in the amount of \$46,774.77, have been excluded from the charges to the reserve requirement and only the balance of the auto depreciation reserve, amounting to \$39,825.74, has been included. The annual depreciation expense for autos is the same as the amount provided by the Company and does not appear in depreciation expense because it is distributed to other accounts through a clearing account.

*Required Annual Depreciation Expense and Depreciation Reserve:*

The purpose of this study is to show the required annual allowance for depreciation expense and the amount of depreciation which has accrued in the depreciable electric plant.

{22770} (page 3)

It is necessary, in order to determine the required annual depreciation cost, to ascertain the service capacity or service life of the depreciable plant. The service capacity which is used or expires in one year is the most accurate measure of the annual depreciation cost. The ratio of the expired service capacity to total service capacity is the most accurate measure of the accrued depreciation.

*Service Lives and Depreciation Rates:*

The plant service capacity has been determined by means of service life estimates of the various classes of depreciable electric plant. Service lives determined by the Federal Power Commission staff engineers, which are set forth in another exhibit, have been applied in this study. These service lives and the equivalent depreciation rates are summarized below:

	Estimated Life	
	Years	Depr. Rate
Intangible Plant	Non-Depr.	—
Land and Land Rights	Non-Depr.	—
Steam Plant	42	2.38%
Hydro Plant	69	1.45%
Transmission Plant	57	1.75%
General Plant	35	2.86%

*Depreciation Method:*

In order to give equitable treatment to the Company's customers and investors, depreciation cost must be accounted for. The depreciation accounting must necessarily be stated to conform with an orderly and consistent plan of depreciation.

[22771] (page 4)

The depreciation plan used in this study is the straight line depreciation method. Each annual accounting period is charged with its pro-rata part of the investment in service capacity. The annual depreciation cost is computed by applying the annual depreciation rate to the average investment for the year.

The amount of accrued depreciation is measured by the cumulative depreciation cost less items retired. Obviously, when the total service life has been reached the depreciation cost is the original investment in the plant, less any salvage value. Prior to the retirement of the plant, the accrued de-



preciation sustained is the cost which has accrued to date, less the net loss on items which have been retired in the past. This balance of accrued depreciation is referred to as the depreciation reserve requirement, because it measures the amount which is required to date in order to provide for the ultimate retirement of the investment in plant.

The following table shows that the required depreciation expense for 1944 and 1945 was \$464,212 and \$465,277, respectively, and that the depreciation reserve requirement is \$8,408,373 as of December 31, 1945.

[22772] (page 5)

	Average Investment	Depreciation Rate	Depreciation Provision
<b>Depreciable Plant—1944</b>			
Steam	\$ 4,527,532	2.38%	\$ 107,755
Hydro	12,815,941	1.45	185,831
Transmission	8,561,435	1.75	149,825
General	727,325	2.86	20,801
<b>Total</b>	<b>\$ 26,632,233</b>	<b>1.74%</b>	<b>\$ 464,212</b>
<b>Depreciable Plant—1945</b>			
Steam	\$ 4,551,943	2.38%	\$ 108,336
Hydro	12,825,433	1.45	185,969
Transmission	8,579,897	1.75	150,148
General	728,127	2.86	20,824
<b>Total</b>	<b>\$ 26,685,400</b>	<b>1.74%</b>	<b>\$ 465,277</b>
<b>Depreciable Plant Cumulative 1911 1945, incl.</b>			
Steam	\$ 75,239,524	2.38%	\$ 1,790,701
Hydro	362,791,312	1.45	5,260,474
Transmission	149,971,064	1.75	2,624,493
General (except auto)	12,908,093	2.86	369,171
<b>Total Cumulative Provisions</b>			<b>\$10,044,839</b>

Less Retirements and  
Adjustments:

Retirements—per books  
(1930-1945)

\$1,193,416

Unrecorded retirements  
(1911-1936)

343,928

Adjustment for dupli-  
cate retirements (1937-  
45)

(8,200)

Adjustment for auto-  
mobile retirements

(46,775)

1,482,369

Replacements charged to  
reserve in lieu of re-  
tirements

193,923

Total Charges

1,676,292

Add Reserve for Auto-  
mobile Depreciation

39,826

Depreciation Reserve  
Requirement, Decem-  
ber 31, 1945

\$8,408,373

*Depreciation Base:*

The details of the depreciable plant cost, by years, are shown on Schedule 2.

[22773] (page 6)

Schedule 2 is a summary taken from a statement of the Company's claimed original cost. The statement shows the additions and retirements, by years, and by Federal Power Commission plant account classification, as classified by the Company.

For purposes of this study, the plant has been summarized by the functional groups of steam, hydro, transmis-

sion and general plant. This classification is necessary because the steam plant, with a shorter service life than hydro and transmission plant, was placed in service in 1925; therefore an over-all composite rate would not apply prior to 1925.

*Eliminations from Company's Claimed Cost Statement by  
F. P. C. Examiners:*

Schedule 3 shows a reconciliation of the Company's claimed cost with the original cost as of December 31, 1945. The total eliminations from the Company's claimed cost amount to \$3,493,494 of which \$1,622,797 applies to depreciable property. As shown on Schedule 2, the eliminations were applied to the year in which such items were initially claimed in depreciable plant. The eliminations, as well as the initial claims are, in certain instances, applied to an approximate year rather than attempt an exact determination of every item by years. An exact determination by years and accounts would be virtually impossible because practically all of the claims eliminated relate to computed overheads rather than specific plant items.

[22774] (page 7)

The eliminations from the claimed cost have been distributed as follows:

Organization and Franchises	\$ 545,357
Land	800,757
Depreciable Plant	217,766
General Overheads	1,929,614
Total	<u><u>\$3,493,494</u></u>

The eliminations from the claimed general overheads for the period 1905-1915, inclusive, have been distributed on



the basis of the Company's initial overhead distribution. In its claimed cost study the Company accumulated overheads for the period 1905-1915, inclusive, and made the initial distribution to the direct costs as of December 31, 1915, thus distributing the construction overheads on a broader base than at the date of initial operation in 1911.

A summary of the claimed direct construction cost and initial overhead distribution is presented on Schedule 4. The ratio of overheads to direct cost of depreciable plant is 70.8% in the Company's claimed cost study. This ratio is reduced to 47.6%, by reason of the FPC Examiners' eliminations.

An amount of \$917,735 has been eliminated from the 1905-1915 claimed direct cost of intangible plant and land. The following tabulation shows the application to non-depreciable accounts.

[22775] (page 8)

Non-Depr. Accounts	Claimed Direct Cost	Eliminations	Per Cent
301.2	\$ 366,972	\$335,056	91.3
301.3	94,919	250	—
302	34,542	34,542	100.0
303	8,873	8,873	100.0
320	3,082,555	539,014	17.5
340	1,224	—	—
341	1,135	—	—
	<u>\$3,590,220</u>	<u>\$917,735</u>	<u>25.3</u>

The elimination of \$917,735 is largely the claimed value for McCall Ferry Power Company stock, except the item of \$34,542, which is the direct cost of fishways transferred from intangible to depreciable plant.

The staff eliminations of \$917,735 of claimed direct costs of intangible plant and land affects the Company's distribution of overheads as between depreciable and non-depreciable plant. The following computation shows the



calculation of overheads which have been eliminated from non-depreciable plant and redistributed:

Non-Depr. Accounts	Ratio of Direct Cost Eliminated	Total Overheads 1905-15	Amount Eliminated	Transferred from Intangible to Tangible	Adjusted Overheads
301.1		\$ 7	\$	\$	\$ 7
301.2	91.3	71,219	65,023		6,196
301.3		17,822			17,822
302	100	26,358		26,358	
303	100	8,861	8,861		
320	17.5	881,040	154,182		726,858
340.2		2,238			2,238
341		1,036			1,036
Total	25.3	\$1,008,581	\$228,066	\$26,358	\$754,157

[22776] (page 9)

The staff elimination of claimed overheads is prorated on the basis of the original overhead allocation as follows:

	Overheads 1905-1915	FPC Staff	Adjusted	
	Amount	Ratio	Adjustments	Overheads
Intangible	\$ 24,025	.5%	\$ 7,493	\$ 16,532
Hydro Land	726,858	16.0	239,765	487,093
Trans. Land	3,274			3,274
Non-Depr.	754,157	16.5	247,258	506,899
Steam.	5,984			5,984
Hydro.	3,624,829	79.5	1,191,152	2,433,677
Trans.	179,388	4.0	59,941	119,447
General	11,124			11,124
Depr.	3,821,325	83.5	1,251,093	2,570,232
Total	4,575,482	100.0%	1,498,351	3,077,131
Retirements	234,455			234,455
Am't. Eliminated from N. D.	228,066		228,066	
Total per claim	\$5,038,003		\$1,726,417	\$3,311,586

The adjustment to be made to the Company's claimed cost as of December 31, 1915, is the difference between the claimed overheads and the adjusted overheads as follows:

Overheads 1905-1915			
	Claimed	As Adjusted	Elimination
Intangible	\$ 97,908	\$ 16,532	\$ 81,376
Hydro Land	881,040	487,093	393,947
Trans. Land	3,274	3,274	
Non-Depr.	982,222	506,899	475,323
Steam	5,984	5,984	
Hydro	3,624,829	2,433,677	1,191,152
Trans.	179,389	119,447	59,942
General	11,124	11,124	
Depr.	3,821,326	2,570,232	1,251,094
Retirements	234,455	234,455	
Total	\$5,038,003	\$3,311,586	\$1,726,417

An amount of \$55,771.65 has been eliminated from claimed interest during construction on the transmission lines. This elimination is allocated on this basis of total transmission at December 31, 1915, as follows:

[22777] (page 10)

Transmission (Pa. & Md.):	Amount	Ratio	Elimination
Depreciable	\$1,463,527	75%	\$41,829
Non-Depr.	485,871	25%	13,943
Total	\$1,949,398	100%	\$55,772

An amount of \$111,210.30 has been eliminated from the flowage basin account. Since items were charged to this

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account during the period 1911-1935, inclusive, an average date of 1920 was determined for purpose of prorating the amount eliminated. Another item of \$1,340.98 erroneously charged to Property and Riparian Rights account is also eliminated in 1920, both amounts being prorated to total dollars claimed:

Total Claim as of Dec. 31, 1920:	Amount	Ratio	Elimination
Hydro-Depr.	\$9,004,702	56.7	\$63,816
Trans.-Depr.	1,752,707	11.0	12,381
Gen.-Depr.	110,560	.8	900
Non.-Depr.	5,005,677	31.5	35,454
	<u>\$15,882,646</u>	<u>100.0%</u>	<u>\$112,551</u>

Overhead eliminations are summarized as follows, by years:

Plant	1905-1915	1920	1925	1932	1936	Total
Hydro	\$1,191,152	\$ 63,816	\$ 5,508	\$	\$ (28,524)	\$1,231,952
Trans.	101,779	12,381	32,941	13,714	(21,104)	139,702
Steam			27,569			27,569
General		900	5,279		( 372)	5,807
Non-Depr.	489,266	35,454	( 136)			524,584
Total	<u>\$1,782,188</u>	<u>\$112,551</u>	<u>\$71,161</u>	<u>\$13,714</u>	<u>\$ (50,000)</u>	<u>\$1,929,614</u>

The total eliminations from the Company's claimed cost as of December 31, 1945, are summarized below:

Plant	Overheads	Direct Cost	Intangibles	Land	Total
Hydro-Depr.	\$1,231,952	\$175,161	\$	\$	\$1,407,113
Trans.-Depr.	139,702	34,714			174,416
Steam-Depr.	27,569	898			28,467
General-Depr.	5,807	6,993			12,800
Intangible	81,376		545,357		626,733
Hydro Land	429,265			785,600	1,214,865
Trans. Land	13,943			15,157	29,100
Total	<u>\$1,929,614</u>	<u>\$217,766</u>	<u>\$545,357</u>	<u>\$800,757</u>	<u>\$3,493,494</u>



[22778] (page 11)

Based upon the data described above, the original cost of depreciable plant has been classified by functional groups and by yearly plant balances as set forth in Schedule 2.

*The Company's Depreciation Plan:*

As shown in Column 2 of Schedule 5, prior to 1920 the Company had set up a reserve for depreciation in the amount of \$400,000 by a credit of \$250,000 in the year 1913 and a credit of \$150,000 in 1916. Then, in 1920, the Company instituted its present depreciation plan by transferring the entire balance of \$400,000 from the depreciation reserve to earned surplus and setting up a new reserve covering the years 1917, 1918, and 1919. Thus, no depreciation was recorded for the period 1911-1916, inclusive, in lieu of the \$400,000 transferred to earned surplus although \$813,258.71 was applicable to this period. The various amounts referred to are summarized as follow:

Year	Straight Line Depreciation Expense		Recorded and Transferred to Surplus
	Recorded	Not Recorded	
1911		\$ 99,945.01	
1912		115,271.87	
1913		131,409.01	\$250,000.00
1914		148,721.40	
1915		158,485.95	150,000.00
1916		159,425.47	
1917	\$162,647.42		
1918	166,390.35		
1919	168,377.64		
Total	\$497,415.41	\$813,258.71	\$400,000.00

The depreciation plan adopted in 1920 has been followed for the entire period 1917 to 1945, inclusive. The

plan has also been used for tax purposes and is described as follows by the Company in its tax returns to the Bureau of Internal Revenue:

[22779] (page 12)

"The Company acquired at organization the dam power house and incidental properties then in course of construction, of McCall Ferry Power Company and proceeded to complete the plant and put it into operation.

"A schedule showing the proper depreciation deductions for the years 1910 to 1918, inclusive, is attached hereto and marked Exhibit "A." The value of depreciable property was obtained by taking from a statement of McCall Ferry Power Company as of January 31, 1909, the actual cost figures shown in various accounts, eliminating non-depreciable property and apportioning certain general accounts to the proper classes of depreciable property.

"To these figures have been added the figures of actual expenditures for the year 1910 and for each succeeding year. There were expenditures made between January 31, 1909 and the end of that year by McCall Ferry Power Company and by receivers of McCall Ferry Power Company, but the amounts and apportionment thereof are indefinite and have been neglected.

"The rates of depreciation have been worked out by Mr. Walls, Vice President of the Company, who is a practical engineer, thoroughly familiar with water power developments, and they are based on his own knowledge of the conditions existing at this particular development.

"In its return the Company took the position that there was no depreciation in the early years of its operations. This was wrong and the Bureau of In-

ternal Revenue made a rough adjustment of invested capital to allow for such depreciation. The Bureau, however, permitted no deduction for depreciation for 1917 and 1918.

"The failure to allow for current depreciation is inconsistent and unjust and is so contrary to the usual practice of the Bureau that it is assumed the depreciation deductions for 1917 and 1918 will be allowed without question, and the only question to be settled is the exact amount which should be deducted."

Two additional depreciation studies have been prepared by Sharp, Milne & Co., accountants and auditors employed by the Company. The first report covers the period 1917-1930, inclusive, and the second report covers the period 1931-1937, inclusive. The depreciation base and depreciation charge shown in the Sharp, Milne & Co. [22780] (page 13) reports have been summarized on Schedule 6. The composite lives and rates shown on Schedule 6 have been computed from the annual charge and depreciation base figures. The depreciation base figures are as of the end of each year instead of the average for the year which causes a fluctuation in the computed composite rates when large additions occur.

The Company's registration statement, filed with the Securities and Exchange Commission in connection with the present  $3\frac{1}{4}\%$  bonds, contains the following statement of the Company's depreciation policy and service lives:

"The Company and its wholly-owned subsidiary transmission companies have provided depreciation reserves applicable to their properties to cover losses suffered by structures and equipment from wear and tear and obsolescence, including deferred maintenance but excluding current maintenance or repairs. A depreciation reserve account was opened as of 1917 and from the year until January 1, 1931, the annual de-



preciation charges as well as the corresponding credits to the reserve account were computed upon an age-life basis. Beginning January 1, 1931 the depreciation policy has been as follows:

"With respect to plant, property and equipment installed prior to January 1, 1931, the Company and its wholly-owned subsidiary transmission companies have set aside annually from earnings, for depreciation the same amount (\$355,146.73) which had been included in operating expenses during the year 1930, plus an amount computed at the rate of  $2\frac{1}{2}\%$  per annum on the cost of net additions to properties by months subsequent to January 1, 1931.

"Deductions for depreciation claimed for income tax purposes have also been computed on the basis outlined above.

"The estimated lives of various classes of depreciable property, upon which the annual depreciation charges for 1930 and prior years were calculated, are the equivalent of the following annual rates:

[22781] (page 14)

Service Life-Yrs.	Annual Rate	Classification
200	.5%	Dam and Hydraulic Structures (Including Massive Concrete or Equally Permanent Foundation Structures)
50	2.0%	Turbines (Older Types)
100	1.0%	Turbines (Moody Draft Type)
40	2.5%	Generators (Older Types)
66	1.5%	Generators (Class "B" Insulation)
40	2.5%	Auxiliary Machinery (Iron and Steel)
66	1.5%	Auxiliary Machinery (Brass, Galvanized Steel, etc.)
40	2.5%	Switchboard

Service Life-Yrs.	Annual Rate	Classification
66	1.5%	Bulk Power Switch Equipment
100	1.0%	Concrete Building (or Mainly Concrete)
50	2.0%	Brick Building (or Mainly Brick)
25	4.0%	Frame Buildings
25	4.0%	Transmission Line Towers
100	1.0%	Transmission Line Cables—Aluminum
200	.5%	Transmission Line Cables—Copper
33	3.0%	Underground Cables (Street Service)
50	2.0%	Racks, Headgates, Booms, etc. (Immersed Equipment, etc.)
20	5.0%	Transmission Lines, etc. (Local Lines)
40	2.5%	Transformers (Older Types)
66	1.5%	Transformers (Outdoor Conservatore Type)
25	4.0%	Buildings (Special Steel Buildings, etc.)
20	5.0%	Transformers (High Current Type)
33	3.0%	Steam Generating System Properties

The effective service lives at the present time are shorter than indicated by the above statement because plant additions since 1930 have an estimated life of 40 years as compared with the composite life of 53 years for plant installed prior to 1931. In effect, the Company shortened the service lives for hydro plant and transmission plant, and lengthened the service life for the steam plant, when it adjusted the depreciation rates in 1931.

*Retirements Charged to the Depreciation Reserve:*

When the Company began its plan of depreciation accounting in 1920 it did not record the retirements from plant accounts and [22782] (page 15) consequently there were no retirements charged to the reserve. In the case of certain items which were renewed or replaced, the cost of the re-

placement was charged to the depreciation reserve and no retirement was recorded. This method is, in effect, the capitalization of the renewals and replacements by an indirect method of accounting and no adjustment to plant or depreciation reserve is necessary.

Since 1930 the net loss on property retired has been charged to the depreciation reserve. Schedule 5 shows the recorded gross retirements from plant in Column 3 in the amount of \$1,306,537.63 and the net loss in Column 6, in the amount of \$1,193,415.66. Unrecorded retirements for the period 1911-1936 were determined in connection with the original cost study. The amount of \$343,928.42 covers the unrecorded retirements and an adjustment of the recorded retirements, to reflect the new classification and overhead distribution made in the original cost study. Overheads applicable to retirements since 1937 have been computed by the standard 25% overhead rate used prior to January 1, 1937.

*Deferred Maintenance Charged to the Depreciation Reserve:*

Column 7 of Schedule 5 shows that a total of \$680,180.03 has been charged to the depreciation reserve as replacements and "deferred maintenance." The items included in such charges have been classified as follows by the staff:

Plant Additions	\$122,488.49
Plant Replacements	193,922.49
Plant Maintenance	363,769.05
Total	<hr/> \$680,180.03

[22783] (page 16)

The following plant additions have been transferred from the depreciation reserve to plant account:



Year	Job Order No.	Description	Amount
1927-8-9	K-531	Extension of Toe of Dam	\$114,596.61
1928-9	K-753	Exciter Board Ventilation	1,212.66
1929	K-837	New Oil Filter	3,387.73
1929	M-843	Lathe for Hydro Plant	2,653.92
1929	K-824	New Fence at Highland- town	637.57
Total			\$122,488.49

The details of plant replacements as shown on Schedule 7 and the details of plant maintenance are shown on Schedule 8.

The Company claims that its depreciation rates include provisions for "deferred maintenance" but exclude current maintenance or repairs. Its definition of "deferred maintenance" is that it covers, in general, repair and resurfacing of concrete structures, including dam, welding turbines, resurfacing turbine distributors, rewinding generators and rewinding transformers.

The Company has not determined how much it is providing for the so called "deferred maintenance" in its depreciation charge to expense, or how much of the depreciation reserve balance is available for "deferred maintenance."

The service lives estimated by the Commission's staff do not include provisions for maintenance and it follows that if the recommended service lives are used by the Company in the future no maintenance expense is properly chargeable to the depreciation reserve.

[22784] (page 17)

The balance of the adjusted book reserve for depreciation is \$354,745 in excess of the reserve requirement as of December 31, 1945. In view of the Company's practice of

providing for and charging certain maintenance to the reserve in the past, it is reasonable to conclude that this excess is available for a large item of maintenance on the dam which the Company expects to incur.

In a letter to the Commission's staff, dated November 28, 1945, the Company's chief engineer estimated that the approximate cost of resurfacing the spillway of the Holtwood dam would be from \$500,000 to \$750,000, depending upon whether the work was done with concrete or with granite blocks. A reasonable method of handling this expense, when it is incurred, would be to charge it to the excess of the adjusted book reserve over the reserve requirement, to the extent of such excess, and charge the balance to current maintenance expense.

**JOHN M. NEWLANDS**

**John M. Newlands**

**Chief Examiner of Accounts**

**EDWARD L. DUNN**

**Edward L. Dunn**

**Supervising Accountant**

[22785] (page 18)

## PENNSYLVANIA WATER &amp; POWER COMPANY

Docket IT-5915

Schedule 1

## COMPARISON OF ANNUAL AND ACCRUED DEPRECIATION

PER BOOKS, PER BOOKS AS ADJUSTED AND RESERVE REQUIREMENT  
AS OF DECEMBER 31, 1945

## Depreciation Reserve

	Per Books	Per Books As Adjusted	Reserve Requirement
Total Provisions—December 31, 1945	\$10,921,712	\$10,921,712	\$10,044,839
Retirements and Adjustments:			
Recorded Retirements (1930-1945)	1,193,416	1,193,416	1,193,416
Unrecorded Retirements (1911-1936)		343,928	343,928
Duplicate Retirements (1937-1945)		(8,200)	( 8,200)
Auto and Truck Retirements			(46,775)
Total Retirements	1,193,416	1,529,144	1,482,369
Plant Additions	122,488	—	—
Replacements	193,923	193,923	193,923
Deferred Maintenance	363,769	363,769	—
Total	680,180	557,692	193,923
Depreciation on Plant Sold:	71,758	71,758	—
Total Retirements and Adjustments	1,945,354	2,158,594	1,676,292
Add: Reserve for Automobile Depr.			39,826
Balance — December 31, 1945	\$ 8,976,358	\$ 8,763,118	\$ 8,408,373



	Depreciation Reserve		
	Per Books	Per Books As Adjusted	Reserve Requirement
<b>COMPUTATION OF AVERAGE RESERVES FOR 1944 AND 1945:</b>			
Balance, December 31, 1943	\$ 7,920,305	\$ 7,706,326	\$ 7,565,023
Depreciation Expense—1944	572,365	572,365	464,212
Auto Depr.—Clearing Account	3,624	3,624	3,624
Retirements <sup>1</sup>	(31,721)	(31,692)	(31,692)
Deferred Maintenance	( 714)	( 714)	—
Balance, December 31, 1944	8,463,859	8,249,909	8,001,167
Average Reserve — 1944	\$ 8,192,082	\$ 7,978,118	\$ 7,783,095
Depreciation Expense—1945	574,245	574,245	465,277
Auto Depr.—Clearing Account	2,729	2,729	2,729
Retirements <sup>1</sup>	(61,510)	(60,800)	(60,800)
Deferred Maintenance	( 2,965)	( 2,965)	—
Balance, December 31, 1945	8,976,358	8,763,118	8,408,373
Average Reserve — 1945	\$ 8,720,108	\$ 8,506,513	\$ 8,204,770

1. Recorded retirements adjusted for duplicate retirement of \$29 in 1944 and \$710.00 in 1945.

**Exhibit No. 64**

**3621**

**EXHIBIT NO. 64.**

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**ALLOCATION**

Table I

HOLTWOOD AND SUSQUEHANNA AVERAGE PLANT IN SERVICE - 1944  
ITEMS ASSIGNED TO INDIVIDUAL CUSTOMERS AND THE POOL

	P.P. & L. Co. 1	P.E. Co. 2	Ed. Lt. & Pr. Co. 3	P.R.R. Co. 4
<u>Plant In Service</u>				
<u>Production Plant</u>				
1 Hydro				
2 Steam				
3 Total Production Plant				
<u>Transmission Plant</u>				
4 Holtwood - Baltimore Line				
5 Highlandtown Substation				
6 Baltimore - Gunpowder Line				
7 Safe Harbor - Westport Line (2/3 Balt., 1/3 Pool)				
8 Safe Harbor - Riverside Line (2/3 Balt., 1/3 Pool)				
9 Washington - Ellicott Line (2/3 Balt., 1/3 Pool)				
10 Ellicott Switching Station (2/3 Balt., 1/3 Pool)				
11 Safe Harbor - Perryville Line (61% P.R.R. 39% Baltimore)				674,216
12 Conestoga Substation (61% P.R.R. 39% Baltimore)				719,925
13 Perryville Switching Station (61% P.R.R. 39% Baltimore)				444
14 Violet Hill Substation			393,418	
15 Holtwood - York Line (29% Ed. Lt. Pr. Co.)			116,426	
16 Holtwood - Coatesville Line		586,725		
17 Newlinville Switching Station		9,959		
18 Holtwood - Lancaster Line	17,025			
19 Engleside Switching Station	6,635			
20 Donegal and Donegal Tap Switching Stations	12,609			
21 Manheim and South Akron Switching Stations	3,149			
22 Balance of Transmission				
23 Total Transmission Plant	\$39,418	\$596,684	\$539,844	\$1,394,615
24 Intangible Plant				
25 General Plant				
26 Total Plant in Service	\$39,418	\$596,684	\$539,844	\$1,394,615
27 Percent of Total	0.1	1.8	1.7	4.2



E - 1944  
POOL

<u>Pr. Co.</u>	<u>P.R.R. Co.</u>	<u>Baltimore</u>	<u>Pool</u>	<u>Total Service</u>
	4	5	6	
			\$15,847,486	\$15,847,486
			4,527,533	4,527,533
			<u>\$20,375,019</u>	<u>\$20,375,019</u>
		\$1,371,281		\$ 1,371,281
		971,877		971,877
		171,357		171,357
		1,158,300	579,150	1,737,450
		1,012,710	506,355	1,519,065
		210,772	105,385	316,157
		43,590	21,794	65,384
	674,216	431,076		1,105,322
	719,925	460,280		1,180,205
	444	284		728
			358,492	393,418
				504,918
				586,725
				9,959
				17,025
				6,635
				12,609
				3,112
	<u>\$1,394,615</u>	<u>\$5,831,527</u>	<u>1,560,090</u>	<u>1,560,090</u>
			<u>\$ 3,131,266</u>	<u>\$11,533,354</u>
			173,070	173,070
			<u>779,707</u>	<u>779,707</u>
	<u>\$1,394,615</u>	<u>\$5,831,527</u>	<u>\$24,159,062</u>	<u>\$32,861,150</u>
	4.2	17.8	74.4	100.0

418  
426

844

844

7

Table II

DEVELOPMENT OF RATE BASE  
FOR  
FACILITIES ASSIGNED TO INDIVIDUAL CUSTOMERS AND THE POOL

	<u>P.P. &amp; L. Co.</u> 1	<u>P.E. Co.</u> 2	<u>Ed. Lt. &amp; Pr. Co.</u> 3	<u>P.R.R. Co.</u> 4	<u>Baltimore</u> 5	<u>Pool</u> 6	<u>Total Service</u> 7
1 Total Plant in Service	\$39,418	\$596,684	\$539,844	\$1,394,615	\$5,831,527	\$24,159,062	\$32,861,150
2 Depreciation Reserve	<u>4,375</u>	<u>106,365</u>	<u>136,034</u>	<u>184,098</u>	<u>1,007,017</u>	<u>6,540,229</u>	<u>7,978,118</u>
3 Net Plant in Service	35,043	490,319	403,810	1,210,517	4,824,510	17,918,833	24,883,032
Working Capital							
4 Cash Working Capital	-	2,016	4,032	2,464	22,848	192,640	224,000
5 Materials and Supplies	<u>290</u>	<u>5,224</u>	<u>4,933</u>	<u>12,188</u>	<u>51,654</u>	<u>291,711</u>	<u>366,000</u>
6 Total Working Capital	290	7,240	8,965	14,652	74,502	484,351	590,000
7 Rate Base	<u>\$35,333</u>	<u>\$497,559</u>	<u>\$412,775</u>	<u>\$1,225,169</u>	<u>\$4,899,012</u>	<u>\$18,403,184</u>	<u>\$25,473,032</u>



Table III

HOLTHOOD AND SUSQUEHANNA OPERATING EXPENSE - 1944  
ITEMS ASSIGNED TO INDIVIDUAL CUSTOMERS AND THE POOL

Holtwood and Susquehanna		P.P. & L. Co.	P.E. Co.	Ed. Lt. & Pr. Co.	P.R.R. Co.	Baltimo	P.R.R. Co.	Baltimore	Pool	Total Service
		1	2	3	4	5	4	5	6	7
<u>Production Cost Exclusive of Purchased Power</u>										
1	Hydro	\$	\$	\$	\$	\$	\$	\$	\$ 357,980	\$ 357,980
2	Steam - Fuel and Water								332,035	332,035
3	Steam - Boiler Plant & Coal Handling Equip. Mt.								53,152	53,152
4	Steam - Other Operating and Maintenance								201,310	201,310
5	Total Production Expenses								944,477	944,477
<u>Transmission</u>										
6	Highlandtown Substation					78,661		78,661		78,661
7	Holtwood - Highlandtown & Baltimore - Gunpowder Lines					41,474		41,474		41,474
8	Ellicott Switching Station (2/3 Baltimore)					73		739	369	1,108
9	Safe Harbor - Westport, Safe Harbor - Riverside, and Ellicott - Washington Lines (2/3 Baltimore)					19,633		19,633	24,817	74,450
10	Conestoga Substation (61% P.R.R. 39% Balt.)				8,477	5,419	8,477	5,419		13,896
11	Safe Harbor - Perryville Line (61% P.R.R. 39% Balt.)				10,415	6,659	10,415	6,659		17,074
12	Holtwood - Coatesville Line		15,012							15,012
13	Violet Hill Substation			30,195						30,195
14	Holtwood - York Line (29% Ed. Lt. & Pr. Co.)			2,518					6,164	8,682
15	Balance of Transmission Expense	788							73,166	73,954
16	Total Transmission Expense	\$ 788	\$15,012	\$32,713	\$18,892	\$182,585	\$18,892	\$182,585	\$ 104,516	\$ 354,506
17	Administrative and General Expenses								190,891	190,891
18	Total Operating Expense Exclusive of Purchased Power	\$ 788	\$15,012	\$32,713	\$18,892	\$182,585	\$18,892	\$182,585	\$1,539,884	\$1,789,874
19	Percent of Total	-	0.9	1.8	1.1	10.2	1.1	10.2	86.0	100.0



Table III - a

RECONCILIATION OF OPERATING EXPENSE ALLOCATED IN TABLE III  
WITH EXPENSE REPORTED BY HOLTWOOD IN F.P.C. FORM 1

Operating Expense, 1944, as reported		\$2,579,099
Revenue from Interchange Sales in Pennsylvania <sup>1/</sup>		628,867
		<u>3,207,966</u>
Susquehanna Capital Stock and Property Taxes	\$128,776 <sup>2/</sup>	
Susquehanna Depreciation	<u>65,060</u>	
		193,836
		<u>3,014,130</u>
Less Safe Harbor Bill as rendered		1,214,553
		<u>1,799,577</u>
Less Adjustment Credit to Admin. and Gen. Exp.		9,703
Balance of Operating Expense as allocated in Table III		<u>\$1,789,874</u>

<sup>1/</sup> Revenue from interchange sales to customers in Pennsylvania is shown in the company's report as a credit to Operating Expenses. In this study the amount of these sales has been transferred to Revenue.

<sup>2/</sup> Operating Expenses as reported contain the total costs of Susquehanna Transmission Company of Maryland, which include Taxes and Depreciation. These are taken out for separate handling and are combined with Taxes and Depreciation of Holtwood.

Table IV

## ASSEMBLY OF TOTAL COSTS ASSIGNED DIRECTLY TO CUSTOMERS AND THE POOL

	<u>P.P. &amp; L. Co.</u> 1	<u>P.E. Co.</u> 2	<u>Ed. Lt. &amp; Pr. Co.</u> 3	<u>P.P.P. Co.</u> 4	<u>Baltimore</u> 5	<u>Pool</u> 6	<u>Total Service</u> 7
1 Operating Expense	\$ 788	\$15,012	\$32,713	\$ 18,892	\$182,585	\$1,539,884	\$1,789,674
2 Bill. for Safe Harbor Power						992,535	992,535
3 Taxes	7,696	12,251	9,931	25,546	98,560	382,980	536,964
4 Depreciation Expense	723	6,548	9,385	21,566	65,858	360,132	464,212
5 Return 5 Percent	1,766	24,878	20,639	61,258	244,951	920,159	1,273,651
6 Total Cost	<u>\$10,973</u>	<u>\$58,689</u>	<u>\$72,668</u>	<u>\$127,262</u>	<u>\$591,954</u>	<u>\$4,195,690</u>	<u>\$5,057,236</u>

Table V

**ALLOCATION OF POOL COSTS TO CAPACITY AND ENERGY COMPONENTS AND  
DEVELOPMENT OF UNIT COSTS PER KILOWATT AND PER KILOWATT-HOUR**

	Production Facilities			Transmission Facilities 4	Total Jointly Used Plant 5
	Hydro 1	Variable 2	Fixed 3		
1 Production Plant	\$15,847,486		\$4,527,533	\$	\$20,375,019
2 Transmission System				3,131,266	3,131,266
3 Total Jointly Used Plant Directly Classified	15,847,486		4,527,533	3,131,266	23,506,285
4 Percent Total	67.4		19.3	13.3	100.0
5 Intangible and General Allocated	642,172		983,886	126,719	952,777
6 Total Jointly Used Plant in Service	16,489,658		4,711,419	3,257,985	24,459,062
7 Depreciation Reserve	4,383,339		1,489,064	668,026	6,540,229
8 Net Investment	12,106,519		3,222,355	2,589,959	17,918,833
9 Working Capital	65,690		107,686	19,264	192,640
10 Materials and Supplies	196,613		56,300	38,798	291,711
11 Total Working Capital	262,403		163,986	58,062	484,451
12 Rate Base	\$12,368,822		\$3,386,341	\$2,648,021	\$18,403,184
<u>Total Cost of Service</u>					
13 Operating Expense excluding Purchased Power	\$ 525,374	\$ 565,344	\$ 295,561	\$ 153,605	\$ 1,539,884
14 Taxes					
15 Property and Capital Stock and Income (Plant Ratio)	244,269		69,916	48,201	362,416
16 Retirement and Unemployment and Misc. (Operating Ratio)	7,012	7,547	3,948	2,057	20,564
17 Depreciation Expense	197,230		114,349	48,553	360,132
18 Return - 5% of Rate Base	618,441		169,317	132,401	920,159
19 Purchased Power	992,535				992,535
20 Total Pool Cost	\$ 2,584,861	\$ 572,891	\$ 653,121	\$ 384,817	\$ 4,195,690
<u>Classification to Demand and Energy Components</u>					
		Total	Capacity	Energy	
21 Total Hydro Power Cost, 67.5% Capacity ✓		\$2,584,861	\$1,744,781	\$ 840,080	
22 Variable Steam Costs		572,891		572,891	
23 Fixed Steam Cost		653,121	653,121		
24 Transmission Cost		384,817	384,817		
25 Total Cost		\$4,195,690	\$2,782,719	\$1,412,971	
26 Unit Costs			\$19.22/Kw	1.43 Mills/Kwh	



Table V-A

[22810]

Exhibit No. 64

3628

BALANCE OF DEPENDABLE CAPACITY AVAILABLE FOR BALTIMORE CO.  
INCLUDING ONE-HALF OF ADDITIONAL CAPACITY FROM S.H. PONDAGE

		Holtwood		Safe Harbor	Total Hydro	Total Hydro and Steam
		Steam	Hydro			
		(1)	(2)	(3)	(4)	(5)
1	Installed Capacity	26,000 kw	104,000 kw	230,000 kw	334,000 kw	360,000 kw
2	Holtwood and Safe Harbor - % of total hydro		31.14	68.86	100.0	
3						
4	Dependable Capacity on regular weekly cycle of draw and refill				197,000 kw	
5	Plus one-half of additional capacity from use of S.H. pondage				28,500 kw	
6	Total dependable capacity allocated on basis of installed capacity	26,000 kw	70,221 kw	155,279 kw	225,500 kw	251,500 kw
7	Percent of total	10.3	27.9	61.8	89.7	100.00
8	Percent of Installed Capacity	100.0			67.5%	
9						
10	Reported station use and trans. loss allocated to dependable capacity	2,370 kw	6,416 kw	14,214 kw	20,600 kw	23,000 kw
11						
12	Net Dependable Capacity available for load	23,630 kw	63,805 kw	141,065 kw	204,800 kw	228,500 kw
13						
14	<u>Demands of Pa. Customers on System Peak Form 12 - Pool</u>					
15		Non Firm	Firm	Firm Loads Plus		
16				10% Reserve		
17	P.E. & L. Co.	2,000 kw	52,000 kw	57,200 kw		
18	P.E. Co.	10,000 kw	23,000 kw	25,300 kw		
19	Ed. L. & P. Co.		9,000 kw	9,900 kw		
20	M.E. Co.	12,000 kw				
21	Total for Resale	24,000 kw	84,000 kw	92,400 kw		92,400 kw
22	Balance for Baltimore and P.R.R.					136,100 kw
23	P.R.R. Co. in Pa. Dec. billing		28,397 kw	31,237 kw		31,237 kw
24	Total coincident firm demand		112,397 kw	123,637 kw		
25	Balance available for Baltimore from Holtwood and Safe Harbor					104,863 kw
26						
27	Less Baltimore's two-third share of S.H.					94,043 kw
28						
29	Balance available for Baltimore from Holtwood Co.					10,820 kw

SYSTEM LOAD DATA NET ENERGY FROM HOLTWOOD PLANT  
PLUS ONE-THIRD OF SAFE HARBOR 1944, WITH ADDITION TO ADJUST FOR AN AVERAGE WATER YEAR

		Hydro (1)	Steam (2)	Total Generation (3)	Total Holtwood Plus 1/3 S.H. (4)
1	Net Generation				
2	Holtwood	512,768,000	171,091,000		683,859,000
3	Safe Harbor	772,112,000			257,381,000
4	Total	1,284,907,000	171,091,000	1,455,998,000	941,237,000
5	Transmission Loss				57,252,300
6	Net delivered				883,984,700
7	Delivery to Firm Loads				
8	Pennsylvania RR Co. in Pennsylvania	194,082,000			
9	Wholesale Sales to Utility Companies in Penna.	512,484,756			
10	Total				736,566,756
11	Balance available to Baltimore Co.				147,417,944
12	Net Sales of Baltimore's energy in interchange <sup>2/</sup>				120,600,000
13	Net delivery to Baltimore				26,817,944
15	Total delivered from generating stations - 1944				883,984,700
16	Additional delivery in average water year <sup>1/</sup>				104,182,056
17	Total available in average water year				988,166,756
18	Total available to Baltimore - 1944				147,417,944
19	Additional available in average water year <sup>1/</sup>				104,182,056
20	Total available to Baltimore average water year				251,600,000

<sup>1/</sup> Actual Delivery to Baltimore 1944	152,134,944
Actual Received from Baltimore 1944	125,317,000
Actual Net Sale to Baltimore 1944	26,817,944
Company's Estimate of Sales to Baltimore in Avg. Year	131,000,000
Additional Sales in Average Year over 1944	104,182,056

<sup>2/</sup> Energy to which Baltimore is entitled but chooses to sell in interchange in Pa.

Company	Purchased	Sold	Net Sales	Net Bill
M. E. Co.	6,133,000	65,156,000	59,323,000	\$246,993
P. E. Co.	21,771,000	40,901,000	19,130,000	91,739
P.P. & L. Co.	11,805,000	53,952,000	42,147,000	210,136
Total	39,709,000	160,009,000	120,600,000	\$288,868